EPA Region 8 Superfund and Land Revitalization

Annual Report | ***FY 2011***

Partnership and Innovation in the Rocky Mountains and Plains Region: The Year in Review

U.S. Environmental Protection Agency
Region 8 Superfund

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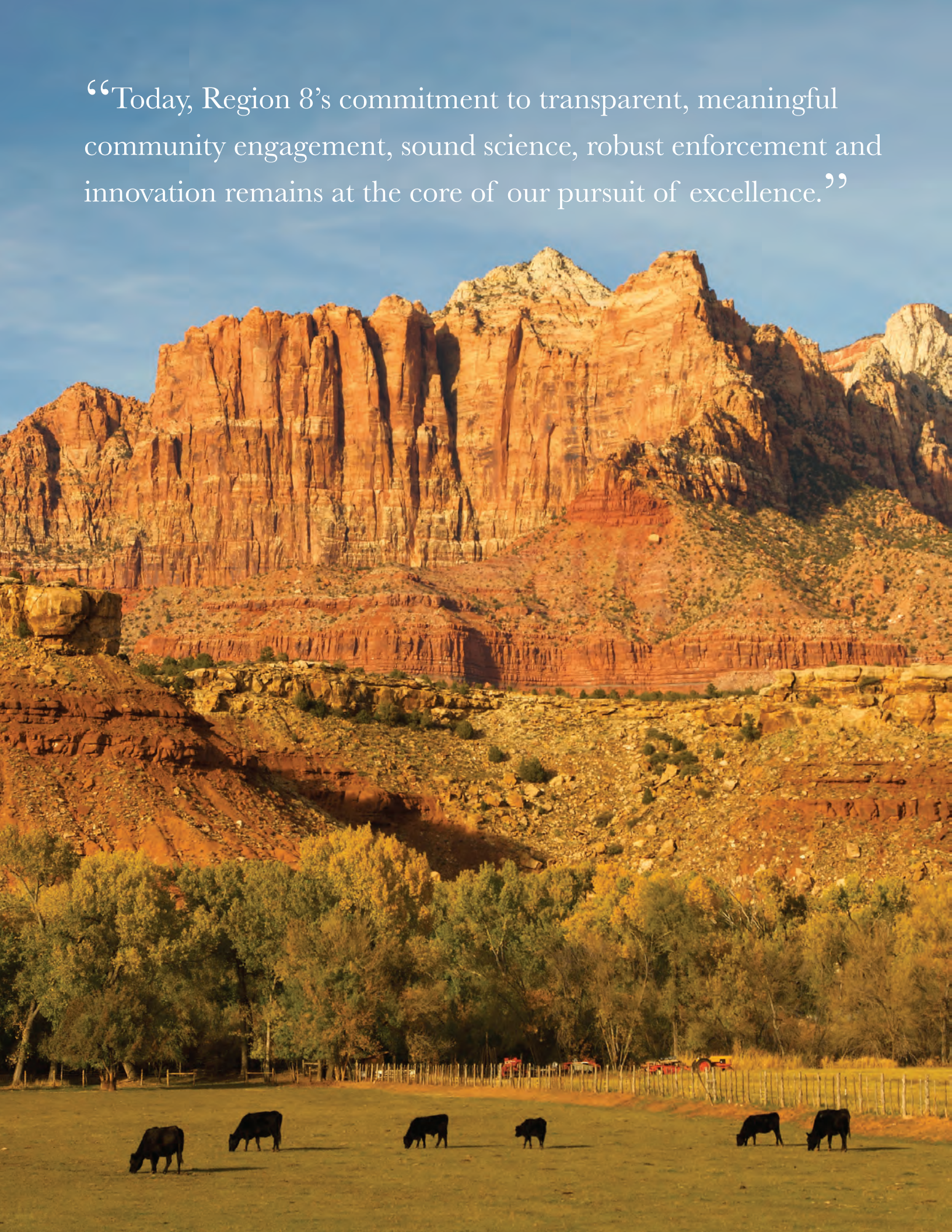


“Today, Region 8’s commitment to transparent, meaningful community engagement, sound science, robust enforcement and innovation remains at the core of our pursuit of excellence.”

WELCOME

Welcome to the Region 8 Superfund program. For more than three decades, the program has served the people and communities of the Rocky Mountains and Plains Region. Nationally, the program has played a vital role in protecting human health and the environment since 1980. In our rural communities and cities, suburbs and industrial areas, the program responds rapidly to uncontrolled hazardous waste releases and cleans up the nation's most contaminated lands.

Region 8 Superfund's activities are built on a foundation of meaningful community engagement, scientific excellence, a network of dedicated partners and innovative approaches like our "enforcement first" policy to comprehensively and cost-effectively achieve the program's mission. We work closely with citizens, businesses and partners in other agencies and organizations across our six states and 27 tribal nations to support safe, healthy communities and protect the environment.

This report highlights Region 8 Superfund's activities in Fiscal Year (FY) 2011.

- We responded to emergencies of national significance, including the Yellowstone River Oil Spill in Montana and the historic flooding of the Souris River in North Dakota.
- We continued the long-term cleanup of some of the most complex, challenging sites in the nation, such as the Libby Asbestos site in Montana.
- We implemented innovative approaches enabling green remediation, ecological revitalization and renewable energy opportunities.
- Through EPA's Integrated Cleanup Initiative, we accelerated cleanups and supported the efforts of sustainable, resilient and livable communities to revitalize formerly contaminated, stigmatized areas.
- We enabled new opportunities for vulnerable communities through EPA's Community Engagement Initiative and related efforts.

Today, Region 8's commitment to transparent, meaningful community engagement, sound science, robust enforcement and innovation remains at the core of our pursuit of excellence. In 2012, we look forward to new opportunities to strengthen healthy communities and advance environmental protection. Through collaboration with our partners, fiscal responsibility, and the dedication and integrity of our staff, we will continue to make a powerful difference.

Martin Hestmark
Acting Assistant Regional Administrator
Office of Ecosystems Protection
and Remediation

Superfund 101

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), better known as Superfund, mandates that EPA respond to uncontrolled releases of hazardous substances that pose an immediate or future threat to human health and the environment. Superfund provides guidelines for locating, investigating and cleaning up the worst hazardous waste sites across the nation.

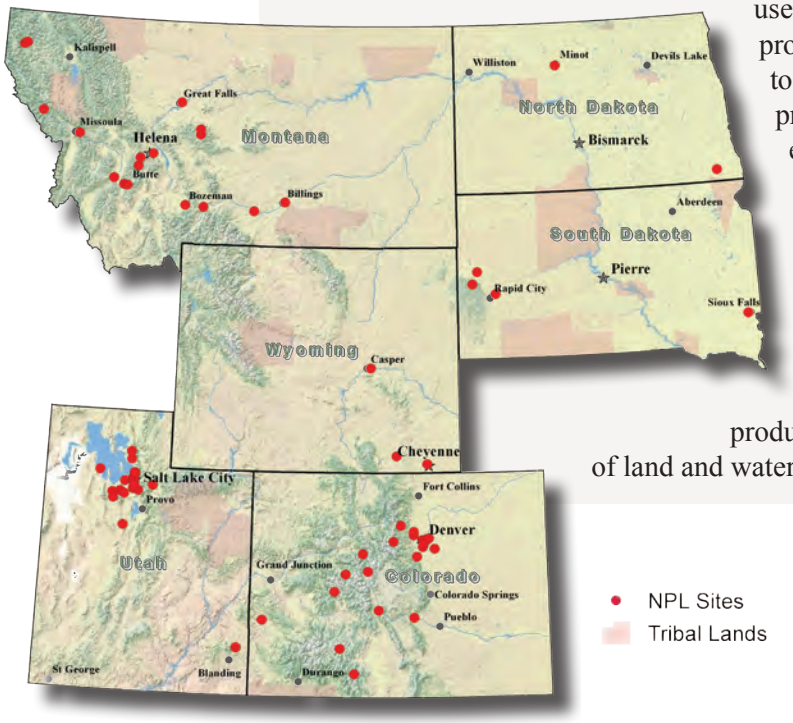
Safeguarding Healthy Communities, Advancing Environmental Protection

The Region 8 Superfund cleanup program plays a vital role in protecting human health and the environment. Region 8 responds to the release and potential release of hazardous wastes and cleans up sites in the Rocky Mountains and Plains Region. Region 8 serves Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 sovereign tribal nations.

Region 8 Superfund's activities include both short-term and emergency cleanups as well as long-term remedial actions at National Priorities List (NPL) and Superfund Alternative Approach sites. The emergency response program responds quickly to fires, train derailments, floods and other events involving the release of hazardous substances. The emergency response program also undertakes removal actions, short-term cleanups to address hazardous substances that pose an immediate health threat. The remedial program oversees long-term cleanup of the most complex contaminated sites.

From our offices in Denver, Colorado and Helena, Montana, Region 8 works closely with many partners – state, local and tribal governments, businesses, non-governmental organizations, communities and individuals – to ensure the protection of human health and the environment at these sites. EPA also plays a role at Federal Facilities like Department of Energy and Department of Defense sites.

Finally, Region 8 focuses on ensuring that, following cleanup, Superfund sites are ready for communities to return them to beneficial use. Region 8 works across EPA programs and with diverse partners to assess the extent of environmental problems more comprehensively and ensure the integration of future use considerations in cleanup decisions. This also leverages a wider range of resources and solutions to achieve cleanup and restoration goals. In the long term, our goal is that all environmental cleanup and restoration activities focus on the productive reuse and sustained protection of land and water resources.



Photos: Region 8's offices in Denver, Colorado. Gold-level certified by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program, the facility is sustainably designed, includes a 20,000-square-foot green roof, and is EnergyStar-certified for energy conservation.

Green Building *in Action*

Region 8's offices in Denver, Colorado, are gold-level certified by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program. The facility's sustainable design includes a 20,000-square-foot green roof. It is also Energy Star-certified for energy conservation.

In 2011, Region 8 completed an updated Environmental Report Card for the building. Our offices met or exceeded six of the seven criteria.

Criteria	Status	Grade
Sustainable Location / Alternative Commuting	Location is close to light rail, a bus terminal and bike paths.	Pass
Fleet Vehicles – 30 percent reduction in vehicle petroleum use by FY 2020	Since FY 2009, the fuel economy of Region 8's 24 vehicles has increased by 3.9 miles per gallon. Fuel purchasing has decreased by 12,093 gallons, or 13 percent.	Pass
Water Use – reduce consumption by 2 percent annually, or 26 percent by FY 2020	Region 8 has reduced the building's water usage by 25 percent since 2008.	Pass
Stormwater Management	Green roof reduces runoff from small storms by 85 percent and runoff from large storms by approximately 50 percent.	Pass
Electronics Stewardship	Region 8 donated 3,540 pounds of electronic equipment for reuse and recycled 6,818 pounds of office electronics. One hundred percent of Region 8's new electronic equipment purchases meet the highest environmental standards.	Pass
Solid Waste Generation / Diversion – recycle or divert 50 percent of waste by FY 2015	Following implementation of compostable material collection program, Region 8's landfill diversion rate was 85 percent by the end of 2010.	Pass +
Greenhouse Gas Emissions – reduction of 28 percent by FY 2020	The building's carbon emissions have increased 9 percent annually. Region 8 is developing and implementing a greenhouse gas reduction plan.	Did Not Meet 2011 Goal

FY 2011: *Measuring Outcomes*

This report illustrates the Region 8 Superfund program in action, innovating and working collaboratively to protect healthy communities and the environment in the Rocky Mountains and Plains Region. Our annual performance measure goals and program targets, presented below, measure the program's overall achievements and outcomes in FY 2011.

Government Performance and Results Act (GPRA) Performance Accomplishments	
Remedial Site Assessment Completions	56
Superfund-Lead Removal Actions Completed	18
Voluntary Removal Actions, Overseen by EPA, Completed	6
Remedial Action Completions	14
Construction Completions	2
Site-Wide Ready for Anticipated Use	1
Contaminated Groundwater Migration Under Control	1

Superfund Program Remedial Measure Accomplishments	
Remedial Investigation / Feasibility Study (RI/FS) Starts	1
Records of Decision (RODs) Completed	2
ROD Amendments Completed	1
Explanations of Significant Difference Completed	1
Final Remedy Selected	2
Remedial Design Starts	6
Remedial Design Completions	6
Remedial Action Starts	7
Five-Year Reviews Completed	10
Partial NPL Deletions	2

Superfund Program Removal Measure Accomplishments	
Removal Starts	18
PRP Removal Starts without an Enforceable Instrument	4
PRP-Lead Removal Action Completions	1
Action Memos	18
Removal Assessment Starts	26
Removal Assessment Completions	23

Superfund Program Federal Facility Measure Accomplishments	
Decision Documents	4
Remedial Design or RCRA Corrective Measure Design (CMD) Start	1
Remedial Design or RCRA CMD Completion	1
Remedial Action or RCRA Corrective Measure Construction (CMC) Start	2
Remedial Action or RCRA CMC Completion	6
Removal Action, Emergency Removal Action, or RCRA Interim/Stabilization Measure Start	1
Five-Year Reviews	1

The September 2011 static rocket test event in Box Elder County, Utah.

Site Assessment: Evaluating Contamination, Prioritizing Next Steps

The Region 8 Superfund Site Assessment program works with states and tribes to assess and prioritize hazardous waste sites for cleanup. The program evaluates sites to determine whether they qualify for listing on the NPL, consulting with states and affected tribes as part of the process. Site Assessment Managers evaluate sites for potential threats to public health and the environment. If it is determined that another program could better address site conditions, Site Assessment Managers direct sites to different programs, such as the Superfund Emergency Response program, the Resource Conservation and Recovery Act (RCRA) program or state voluntary cleanup programs.

Site Assessment at Rocket Testing Facility in Northern Utah

In 2010 and 2011, Region 8 responded to a citizen petition for a site assessment at a NASA contractor's rocket testing facility in Box Elder County, Utah. The petition's concerns included static rocket testing debris as well as open burning and open detonation activities at the facility. Region 8 and the Utah Department of Environmental Quality (UDEQ) conducted a site investigation that collected groundwater and soil samples to identify any residual impacts from static rocket testing. Potential contaminants of concern include metals, perchlorate and other anions, which are rocket fuel components.

To assess whether the facility's rocket tests could generate potentially dangerous debris, the agencies also conducted soil debris and air monitoring at a September 2011 test event. While the September 2011 rocket test was the facility's final test for NASA's ARES Constellation spaceflight program, the facility will continue to test smaller rockets and explosion devices for the U.S. Department of Defense. Once sampling and modeling results from the site assessment and the test event are available, EPA and UDEQ will share the findings with the community.

Colorado Smelter slagheap, looking southwest from Santa Fe Avenue in Pueblo, Colorado.

Region 8 and the Colorado Department of Public Health & Environment are performing a site assessment at a 25-acre former smelter site in Pueblo, Colorado. The assessment is focused on determining potential lead and arsenic threats to the surrounding community. Built to smelt extracted silver-lead ore, the Colorado Smelter operated from 1883 to 1908, generating large quantities of slag material that persist to this day.

Trenching at the Arsenic Trioxide site.

The American Recovery and Reinvestment Act: *2011 Updates*

Through 2011, the American Recovery and Reinvestment Act has created and sustained jobs and fostered economic growth as well as accountability and transparency in government spending. Nationwide, the Recovery Act allocated $7.22 billion for projects and programs administered by EPA, including $600 million in new funding for Superfund site cleanup and $100 million in new Brownfields program funding for the cleanup, revitalization and sustainable reuse of contaminated properties.

In Region 8, the Superfund program has provided more than $75 million in Recovery Act funding for cleanup at seven Superfund sites in Colorado, Montana, North Dakota, South Dakota and Utah. Region 8's Brownfields program has provided more than $5 million in loans and grants to communities in four states. The Recovery Act resources are helping to sustain employment, expedite environmental restoration and improve the health of communities.

The Recovery Act and Region 8 Superfund

In 2011, Region 8 completed construction of the Recovery Act-funded groundwater treatment system to eliminate human exposure to tetrachloroethene and trichloroethene at the 400-acre **Bountiful/Woods Cross 5th South Perchloroethylene Plume** site in the cities of Bountiful and Woods Cross, Utah. In operation since February 2011, the system had treated 23.2 million gallons of contaminated groundwater through September 2011.

Acidic and heavy-metal-laced water generated from mine wastes at the **Gilt Edge Mine** site impaired surface water quality in Strawberry and Bear Butte Creeks in western South Dakota. In 2011, using Recovery Act funding, Region 8 completed 3,200 feet of drainage ditch grouting and geocomposite liner repair to minimize leakage of acid mine drainage and accelerate the site's long-term cleanup, thereby addressing community concerns and protecting human health.

Recovery Act funding has expedited cleanup of heavy metals contamination at the **Upper Tenmile Creek** site in western Montana. Through 2011, Region 8 has removed waste from residential yards and the Lee Mountain Mine and placed them in a repository, excavated and replaced contaminated material underneath the main road in the community of Rimini, and moved 133,000 cubic yards of material into the Luttrell Repository Highwall Layback project. These efforts are also preventing future erosion and the distribution of wastes via Tenmile Creek, protecting the City of Helena's water supply.

At the **Central City/Clear Creek** site, 30 miles west of Denver, Colorado, Recovery Act funding has accelerated cleanup activities and restored aquatic health. The site's remedy includes the capping of mine waste, restoration of disturbed

areas, and enhanced water treatment to protect human health and restore the North Fork of Clear Creek. Construction of a pipeline to carry mine-contaminated water from the National Tunnel, Gregory Incline and Gregory Gulch was completed in 2011.

At the 1,200-acre **Summitville Mine** site in southern Colorado, construction of a new water treatment plant supported by Recovery Act funding enabled the early completion of the site's remedy. In August 2011, more than 100 people attended a public open house celebrating the site's decade-long cleanup.

In Utah, Region 8 expedited and completed the cleanup of the **Eureka Mills** site a year earlier than planned and under budget. Recovery Act funds were used to complete the stabilization and capping of mine waste areas, construction of drainage controls and the cleanup of lead-contaminated soils in residential areas. The remedial action cleaned up 722 residential properties.

Region 8 used Recovery Act funds to expand the rural water system at the **Arsenic Trioxide** site in southeastern North Dakota to provide safe drinking water to rural residents with arsenic-contaminated groundwater. More than 160 households now connect to new water distribution lines with improved water treatment and distribution infrastructure. The project's completion in 2011 was on time and under budget.

The Recovery Act and Region 8 Brownfields

The Recovery Act has enabled communities across Region 8 to assess, clean up and redevelop brownfield properties in a tough economy. To date, funding has helped complete seven cleanups and 21 assessments, created 181 jobs, and leveraged over $76,000,000.

Missoula, Montana

The City of Missoula used Brownfields Recovery Act funding to advance cleanups at two important properties, the historic Sawmill site and Burns Street Square. The community has slated the 46-acre Sawmill property for mixed-use redevelopment following cleanup, including a 14-acre municipal park. The city allocated $800,000 of its Recovery Act Brownfields funds to continue the cleanup.

Silver Park's opening at the historic Sawmill site.

Loveland, Colorado

The City of Loveland, Colorado, is using $313,561 in Brownfields Recovery Act funding to clean up the downtown Leslie Dry Cleaner property. The State of Colorado and its coalition partners are subgranting the money from their Brownfield Revolving Loan Fund (RLF) to clean elevated levels of groundwater contaminants. The redevelopment of the property and adjacent parcels are part of a major downtown revitalization effort that includes new retail areas, office space, neighborhoods and parking.

Redevelopment plan for the Leslie Dry Cleaner property.

Denver, Colorado

Once a 40-acre contaminated eyesore, the former General Chemical property is now home to an animal shelter and public works facility, both of which are models for sustainable and efficient design. In 2010, the City and County of Denver used a $200,000 Recovery Act subgrant from the State of Colorado's Brownfields Revolving Loan Fund to complete the site's cleanup. The City and County then moved quickly on the construction of a 36,000-square-foot, state-of-the-art animal shelter. Next door, the City's new LEED gold-certified Public Works campus provides space for offices, vehicle maintenance and storage. The project created more than 155 jobs and leveraged over $68,000,000 in investment.

New animal shelter in Denver.

LibbyMT.com

Libby, Montana

Libby is a small town located in the northwest corner of Montana, 35 miles east of Idaho and 65 miles south of Canada. The town lies in a picturesque valley carved by the Kootenai River and framed by the Cabinet Mountains.

The mine near Libby was the source of more than 70 percent of all vermiculite sold in the United States from 1919 to 1990. A toxic form of naturally occurring amphibole asbestos fibers is contained in the vermiculite from the Libby mine. The majority of vermiculite insulation in the United States used vermiculite from Libby.

Protecting Human Health and the Environment: Superfund Cleanup

Region 8 Superfund is committed to protecting communities and the environment. The program's dedication to this effort includes a comprehensive process that not only provides short-term relief for emergency needs, but also determines long-term solutions to attain and maintain human health and environmental restoration at complex sites like Federal Facilities and NPL sites. Since 1999, the program has been working aggressively to protect public health and restore the environment in Libby, Montana. In 2009, for the first time in the history of the Agency, EPA declared a Public Health Emergency at a Superfund site to provide federal health care assistance for victims of asbestos-related disease in Libby.

First-ever Toxicity Values Released, Contaminated Materials Removed in Northwest Montana

EPA's work in Libby, Montana, began when Region 8 sent an Emergency Response Team to investigate local concerns about asbestos-contaminated vermiculite. Since then, EPA has been working closely with the community to clean up contamination and reduce risks to human health.

In May 2011, Region 8 shared the Agency's first-ever draft toxicity values for cancer and non-cancer risks posed by Libby Amphibole asbestos, or "LA." The values support EPA's earlier assessment of ways to reduce exposures in Libby effectively. Once final, EPA will use the toxicity values to develop final risk assessment and cleanup decisions for the site.

Other major site milestones include:

- In 2010, EPA selected remedies for two site areas, signing Records of Decision. One led to the removal of asbestos-contaminated vermiculite at the former Screening Plant in 2010. The other led to cleanup at the former Export Plant; cleanup activities began in 2011, with completion anticipated in 2012. Following cleanup, the area will become Riverfront Park. Remedial actions have paved the way for the return of these properties to productive use.
- In 2011, in response to community concerns, EPA updated its removal strategy to decrease the potential for recontamination.

As of November 2011, EPA and the Montana Department of Environmental Quality (MDEQ) have remediated nearly 1,602 commercial and residential properties, significantly reducing risks to area families. The agencies have removed about 947,043 cubic yards of contaminated soil, 25,323 cubic yards of asbestos-contaminated vermiculite attic insulation and 43,164 cubic yards of asbestos-containing debris. EPA and MDEQ are removing asbestos from approximately 150 properties per year.

Cleanup Progress and New Wildlife Refuge Visitor Center at Rocky Mountain Arsenal

The soil and structure cleanup of this former military and pesticides manufacturing facility near Denver, Colorado, is almost finished. All required soil and structure activities will be completed in 2012. In 2012 and beyond, site activities will include the evaluation of unique evapotranspirative covers designed to prevent precipitation from migrating through consolidated waste left in place into groundwater. The site's water treatment plants continue to extract contaminated groundwater and treat approximately 750 million gallons of water per year.

EPA has deleted approximately 16,000 acres (94 percent) of the site from the NPL. The deletion has allowed the U. S. Army to transfer this acreage to the U. S. Fish and Wildlife Service, expanding the Rocky Mountain Arsenal Wildlife Refuge, one of the largest urban wildlife refuges in the United States. In 2011, the U. S. Fish and Wildlife Service opened and dedicated the new Visitors Center located at the Refuge's Prairie Gateway entrance.

Aerial view of July 2011 flooding in Minot, North Dakota.

Taking Action, Addressing Emergencies

The Region 8 Superfund cleanup program not only provides long-term solutions to protect human health and the environment; Region 8 Superfund's Emergency Response Unit responds rapidly to releases of hazardous substances and oil to protect human health and the environment. Emergencies range from small-scale spills to large events requiring prompt action and evacuation of nearby populations. EPA's On-Scene Coordinators work with local, state and tribal responders to investigate and clean up environmental contamination.

Region 8 Responds to North Dakota Floods, Completes Mission Assignment

In late June 2011, historic and unprecedented flooding of the Souris River in North Dakota engulfed the City of Minot and surrounding communities, forcing more than 11,000 people to evacuate their homes. During the flooding, Region 8 mobilized to Minot in July 2011 at the request of the Federal Emergency Management Agency (FEMA), the City of Minot and the State of North Dakota.

In response to the extensive flood damage and the potential for environmental impacts, FEMA issued a Mission Assignment to EPA to accomplish four objectives: remove household hazardous wastes from the impacted area; decontaminate and prepare white goods and electronic waste for recycling; collect and process orphaned containers; and conduct environmental monitoring and sampling in impacted and work areas. In total, EPA removed:

- Nearly 6,000 units of white goods – air conditioners, refrigerators and other household appliances. EPA removed Freon, mercury and other hazardous materials; the local government recycled the scrap.
- More than 90,000 small containers, including paint, household cleaners and small gas cans containing in total more than 15,000 gallons of gas. EPA sent the gas to a fuel processor.
- Several large containers, including propane tanks. EPA returned the containers to their owners or sent them to a local company for reuse.
- A total of 215 lead-acid batteries. EPA turned the batteries over to the local government.
- Over 550 cubic yards of electronic waste, such as household electronics, computers and television sets. EPA sent the waste to a contractor for recycling.

In addition, EPA collected asbestos-contaminated insulation from over 220 households, conducted air sampling during cleanup activities and conducted soil sampling in city parks once flooding subsided. Final shipments of removed waste and demobilization of EPA staff were completed in September 2011. "For over two months, we've worked hard to help make Minot a safer place to live," said EPA On-Scene Coordinator Paul Peronard. "Our collaborative relationships with the U.S. Army Corps of Engineers, the U.S. Coast Guard and other agencies really helped us execute our mission under FEMA's leadership."

Looking to the future, Region 8 is committed to working with FEMA and City of Minot in support of long-term community recovery efforts. To date, EPA has participated in three FEMA-sponsored Community Recovery Open House Planning Meetings. At the request of FEMA and the community, EPA will continue to partner with FEMA and other agencies to assist with restoration activities in Minot in 2012.

The Yellowstone River Oil Spill: Timely Response to the Silvertip Pipeline Incident

On July 1, 2011, a break occurred in a 12-inch pipeline under the Yellowstone River 20 miles upstream from Billings, Montana. The ExxonMobil Pipeline Company owns the ruptured Silvertip Pipeline. According to the company, an estimated 1,000 barrels of oil entered the river before the closure of the pipeline. While EPA confirmed oil on land and vegetation approximately 72 miles downstream, no one reported significant oil beyond Pompey's Pillar (approximately 45 miles from the spill site). Most of the impacted areas were in a 20-mile area between Laurel and Billings, Montana.

Region 8 responded rapidly to the spill and led the response in close coordination with the State of Montana and other federal agencies. Over 1,000 personnel engaged in cleanup and shoreline assessment efforts and Shoreline Cleanup Assessment Technique (SCAT) teams assessed more than 6,500 acres. Cleanup teams recovered more than 1,000 barrels of oily liquids and oil and 1,740 cubic yards of oily solids. Sampling results for air quality and area sediment, soil and water showed no levels of concern in the water and no elevated levels above instrument detection for volatile organic compounds.

EPA's primary concerns were protecting people's health and cleaning up and restoring the Yellowstone River. Community involvement activities included regular public meetings, briefings for local officials and the media, fact sheets, daily updates, and sampling and monitoring data posted on EPA's website at www.epa.gov/yellowstoneriverspill. Region 8 also sent site-specific soil sampling result letters to 40 landowners affected by the oil spill.

Region 8 worked with the Spirit Lake Tribe in North Dakota to help the tribe develop a plan to guide the tribal community's long-term recovery following several years of flooding in Devil's Lake.

Tribal Assistance

In 2011 and 2012, Region 8 is meeting with all 27 tribal governments to better understand tribal emergency planning and preparedness capabilities and to provide assistance and training to the tribes.

Meetings in 2011 have led to tribal requests for assistance with hazard mitigation plans, hazardous materials handling trainings, grant writing and joint exercises.

EPA's oil spill prevention and removal programs also worked closely with Region 8 tribes in 2011, providing trainings, presentations and materials on Spill Prevention, Control and Countermeasure Plans and other priority topics.

Taking a Closer Look: The Beneficial Effects of the Superfund Program

In March 2011, EPA's Office of Superfund Remediation and Technology Innovation (OSRTI) published a report documenting how the Superfund program has benefited communities and the environment since its inception in 1980. These pages present excerpts from OSRTI's "Beneficial Effects of the Superfund Program" report.

The Superfund program has permanently destroyed or isolated millions of tons of contaminated material, investigated about 40,000 sites to determine the extent of contamination, developed and shared site investigation and cleanup technologies, worked to foster compliance with other hazardous waste management laws, and assisted other federal cleanup programs and states in developing and implementing their own cleanup programs. These actions have halted the potential exposure of millions of people to hazardous substances, enabled thousands of acres of vacant land to be available for beneficial use, and encouraged industrial practices that prevent future releases of hazardous substances.

Direct Effects

1. **Improved Human Health.** The reduction of potential hazardous substance exposure of people near Superfund sites is likely to translate into diminished rates of acute and chronic adverse health conditions. Many of these conditions are quite onerous, including cancer, congenital abnormalities, reduced cognitive abilities in children and cardiovascular disease.

2. **Reduction or Reversal of Damages to Natural Resources.** Damage to valuable natural resources near Superfund sites has been mitigated and reversed. Many of these resources provide valuable services necessary to sustain humans, including food and water, recreational opportunities, ground water replenishment, water filtration and nutrient recycling. Superfund cleanups have also contributed to the maintenance of habitats and ecological diversity.

3. **Improved National Security.** In thousands of emergency response efforts, Superfund has reduced the risk of harm when emergencies strike. EPA is using the experience in this work to improve emergency response capabilities at all levels of government.

4. **Improved Community Economics and Quality of Life.** The evaluation, cleanup and revitalization of Superfund sites have increased the usability of land and led to substantial improvements in the economy and quality of life in many communities.

Region 8
Superfund Site Universe, 2011

- 66 total NPL sites
- 35 construction complete NPL sites
- 6 proposed NPL sites

These 66 total NPL sites include:
- 10 Federal Facilities
- 5 construction complete Federal Facilities
- 1 deleted Federal Facility

Region 8 NPL Sites, by State, 2011	
Colorado	21
Montana	16
North Dakota	2
South Dakota	4
Utah	20
Wyoming	3




Superfund actions have made hundreds of vacant or underutilized NPL sites and thousands of non-NPL properties available for all kinds of productive reuses, contributing to economic and community development, improved quality of life and reduced energy use in many communities.

Through the Superfund program, the status of about 40,000 sites suspected of containing hazardous substances has been determined, resolving uncertainty regarding potential risks and removing a major obstacle to the reuse of these sites.

Secondary Effects

1. **Contributions to Other Cleanup Programs.** Superfund has contributed substantially to the development and operation of cleanup programs managed by states, tribes and other federal programs through funding, research, technical assistance and partnerships.
2. **Improved Environmental Practices by Industry.** The liability provisions in the Superfund law, combined with EPA compliance, outreach and enforcement efforts, have provided impetus for industry to participate in state voluntary and other cleanup programs and modify industrial processes and waste management practices.
3. **Contributions to Environmental and Health Sciences and Technology Innovation.** The Superfund program has advanced site investigation and cleanup methods, knowledge of toxicology and environmental processes associated with hazardous substances in the environment, and knowledge of the health impacts of hazardous substances.
4. **Reduced Unidentified Potential Future Threats.** Superfund actions reduce or eliminate threats that are not fully defined at this time, primarily because we do not have the capability to fully predict the movement of hazardous substances through ground water, soil and other media, the chemical transformation they undergo in these media, and the ultimate environmental and human health impacts.

Community Impact Highlights

- There are more than 500 Superfund sites nationwide in various types of planned and actual reuse as well as continued use. These sites support thousands of jobs with a multi-billion dollar payroll.
- Cleanup and development of these properties make land available for economic development, provide a catalyst for other development, and increase efficiency in the use of public and private infrastructure.
- These properties have improved the quality of life in many communities, eliminating blight and providing valuable amenities, such as new commercial and industrial areas, residences, sports fields, parks and public facilities.
- EPA has documented cases where the values of properties that contain Superfund sites have grown substantially after cleanup. There are also cases where the values have not improved.

Safeguarding America's Future

Region 8 emergency response vehicle.

Did You Know?

In 2011, Region 8 continued to provide support and training for the Response Support Corps (RSC) program. The RSC has volunteers from all Region 8 programs who are willing to respond to major regional and national emergencies. Region 8 currently has over 100 RSC members ready to assist the Emergency Response program in a large incident.

Region 8 is the "Lead EPA Region for Homeland Security" in 2011 and 2012. Region 8 continues to serve as a national leader in sharing the Agency's preparedness efforts and expertise with our partners and seeking new opportunities for enhanced communication, inter-governmental coordination and shared research with our partnership network, as illustrated below.

In 2011, Region 8 continued to strengthen the communications network it has established with federal, state and local response authorities; enhanced expertise and readiness through training and coordinated exercises; and took additional steps to secure infrastructure and hazardous materials. In the long term, these efforts will ensure time-critical and coordinated responses to any incidents.

Operation Mountain Guardian Tests Region's Terrorism Response Capabilities

Region 8 collaborated with local, state and federal partners in 2011 to develop and stage a full-scale exercise testing emergency operation plans in Denver, Colorado. Led by the Denver Police Department, the Colorado North Central All-Hazards Emergency Management Region, the Denver Urban Area Security Initiative and the Denver Metropolitan Medical Response System, the scenario focused on a major terrorist attack at four different venues in the Denver area. Over 1,900 people from more than 100 local, state and federal agencies participated.

Region 8 was involved primarily in the decontamination portion of the exercise, illustrating EPA's role in addressing hazardous materials. The exercise also provided a valuable opportunity for EPA staff to learn more about the roles and responsibilities of other responders, including law enforcement and explosives and ordnance personnel. Region 8 is working with its partners to build on exercise outcomes and lessons learned. Region 8, for example, has long partnered with neighboring Douglas County through the county's Local Emergency Planning Committee.

Residential areas at the California Gulch site.

Ensuring Meaningful Engagement, Protecting Public Health

Authentic, meaningful community outreach and engagement are core components of Region 8's commitment to safe, healthy communities and environmental protection. EPA works with communities across urban areas like Colorado's Front Range and Utah's Wasatch Front, suburban areas, and some of the most rural counties in the nation. Region 8 works closely with the diverse voices in each community to ensure that they have the resources needed to participate early and meaningfully in the Superfund process.

In 2011, Region 8 strengthened its community outreach and engagement efforts through continued coordination with EPA's national Community Engagement Initiative. As part of the initiative, Region 8 is working closely with its partners to ensure transparent and accessible decision-making processes, to deliver information that communities can use to participate meaningfully, to strengthen EPA responsiveness to community perspectives and to ensure timely cleanup decisions.

Cleanup of Residential Areas in Historic Colorado Mining Community Completed

The California Gulch site is located in Leadville, Colorado. Region 8 has been working with the local community for more than two decades. Extensive community outreach and engagement has been a core component of EPA's approach. Activities have included one-on-one meetings, public meetings, newspaper articles, fact sheets and meetings with local officials.

In 2011, EPA deleted remaining portions of the site's residential areas from the NPL. EPA and the State of Colorado have determined that all appropriate response actions, other than operation and maintenance activities and Five-Year Reviews, are complete. EPA would like to thank the Lake County Public Health Agency, elected officials and citizens of Leadville who developed the Lake County Community Health Program. The program serves as the institutional control and operation and maintenance implementor for the site's residential areas. EPA will continue to monitor the program to ensure the remedy is protective of human health and the environment.

Leadville, Colorado: A Brief History

At an elevation of 10,152 feet, Leadville (pop. 2,800) is the highest incorporated city in the country. In the 1860s and 1870s, Leadville was the place to go in the American West. People were attracted by one of the world's largest concentrations of base and precious metals.

Mining, mineral processing and smelting activities in the area produced gold, silver, lead and zinc for more than 130 years. Wastes generated during the mining and ore processing activities contained metals such as arsenic and lead at levels posing a threat to human health and the environment.

Sludge pond at the Gilt Edge Mine site.

Enforcement: Driven by the Rule of Law

Aerial view of the US Magnesium facility, 2011.

Did You Know?

In FY 2011, EPA Region 8:

Entered into 12 settlements with responsible parties at Superfund sites, which resulted in:

- More than $60 million in private party commitments for site study and cleanup.
- More than $3.9 million in private party payments.
- Cleanup of over eight million cubic yards of contaminated soil.

Referred nine cases to the Department of Justice for judicial enforcement activities.

Region 8's Superfund Technical Enforcement program helps ensure the cleanup of Superfund sites by finding and compelling the parties responsible for contamination to clean it up or pay for the cleanup done by another party (i.e., EPA, a state program or other responsible parties).

If a responsible party does not agree to undertake a cleanup, EPA can issue an order to them to do certain work. EPA can also work with the Department of Justice to pursue the party through the federal court system. If a party is out of compliance with an order or settlement, the Superfund enforcement program takes action to bring them into compliance. Such action may include referring the case to the Department of Justice for enforcement, assessing penalties or taking over the work.

In 2011, Region 8 participated in major settlements for Superfund sites in Utah and South Dakota.

Settlement Agreement Reached for Cleanup Investigation in North-central Utah

The US Magnesium facility and areas of waste disposal span 4,525 acres on the southwest edge of the Great Salt Lake, 40 miles west of Salt Lake City. The facility has used brine from the lake to produce magnesium at the site since 1972, a process that has resulted in a variety of toxic wastes that threaten both workers and the environment. In August 2011, Region 8 issued an administrative order on consent to site owner and operator US Magnesium LLC for the performance of the site's remedial investigation/feasibility study, which will inform EPA's selection of an effective remedy for the site.

Multiple Agreements Transfer Properties, Provide Cleanup Funding at Former Gold Mine

The 1,229-acre Gilt Edge Mine site is a former open pit and cyanide heap-leach gold mine located in the Black Hills of South Dakota. From 2009 through 2011, EPA entered into settlements with seven responsible parties that own the property comprising the site. In total, the parties will pay $12.78 million to satisfy liabilities associated with contamination on their respective properties. The property owners also agreed to transfer all land within the site boundaries to the State of South Dakota and to assign all potential rights to insurance proceeds to EPA. In addition, one of the parties will market and sell all other real property to which it holds title and give EPA a portion of the proceeds.

Artist's rendition of the Village at Westerly Creek redevelopment project in Colorado.

Green Remediation and Renewable Energy: Spurring New Opportunities

Cleaning up a hazardous waste site uses energy, water and other natural or material resources. EPA recognizes that much can be done to conserve natural resources, minimize waste generation and reduce energy consumption, consequently improving environmental performance of Superfund activities while fulfilling the Agency's mission to protect human health and the environment.

Examples of environmentally friendly technologies/ approaches include recovering landfill gas for energy production; using renewable energy systems to power on-site treatment systems; purchasing construction materials with recycled or rapidly renewable content; using non-potable water for dust suppression; and promoting sustainable reuse of formerly contaminated lands.

Following its Green Remediation Policy, Region 8 Superfund continues to work collaboratively with its partners to implement green remediation best practices, including the key actions outlined in EPA's 2010 *Green Remediation Strategy.*

Geothermal Heating and Cooling System in North Dakota

Construction of the remedy for the Arsenic Trioxide site was completed in September 2011. The site includes a large area in southeastern North Dakota contaminated with arsenic from the historical use of arsenic-based grasshopper bait and other sources. Cleanup activities included the installation of a geothermal heating and cooling system to lessen cleanup systems' dependency on non-renewable energy sources. Geothermal systems use heat pumps to transfer the ground's natural heat to a building's heating and cooling system. Geothermal power is cost-effective, reliable, sustainable and environmentally friendly. While geothermal wells release greenhouse gases trapped deep within the earth, the emissions are much lower per energy unit than the emissions of fossil fuels. As a result, geothermal power has the potential to help mitigate global warming if used in place of fossil fuels. Geothermal systems also provide the benefit of relatively low electrical operating costs.

Hydroelectric Power Plant is First in the Nation Located at a Superfund Site

At the 1,200-acre Summitville Mine site in southern Colorado, Region 8 and the Colorado Department of Public Health and Environment seized an opportunity to install a micro-hydroelectric turbine at the site, supplementing power needs. The 35-kilowatt facility partially powers the plant that treats acid mining-impacted waters at the site. Completed in September 2011, the turbine will generate an estimated 15 to 20 percent of the electricity needed to operate the new mine water treatment plant at Summitville, reducing the greenhouse gas emissions associated with operation of the plant by a similar amount. Construction of the turbine and the treatment plant also supported more than 100 jobs in the area.

Brownfields Funding Supports Sustainable Redevelopment, Affordable Housing in Colorado

The City of Aurora is in the process of subgranting $250,000 to the Aurora Housing Authority from its EPA-capitalized Brownfields Revolving Loan Fund for asbestos abatement prior to redeveloping outdated public housing at the site with new housing and community amenities. The development project will include 55 units of public housing for seniors and people with disabilities. The Village at Westerly Creek will include open space, walking paths, heated sidewalks, community garden plots, energy star appliances and photovoltaic panels lighting hallways and common areas. EPA Region 8 also conducted a Targeted Brownfields Assessment to help the Housing Authority determine the extent of asbestos-containing materials in the project area and estimate abatement and disposal costs.

Advancing Sustainable Redevelopment

As part of the Superfund program, Region 8 is committed to helping communities restore Superfund sites as valued assets and views the revitalization of communities affected by contaminated properties as a key component of our mission to protect human health and the environment.

Superfund site reuse returns land to productive use and restores blighted properties, which in turn can benefit surrounding communities, providing job opportunities, sustaining local economies, and offering recreational and ecological amenities. Through Superfund site reuse, challenges turn into opportunities. By the end of FY 2011, 28 Superfund sites in Region 8 were determined to be ready for anticipated use.

Integrated Reuse and Cleanup Planning at East Helena Asarco Smelter

Contamination at this RCRA and Superfund site in western Montana affects hundreds of acres of undeveloped land that are held in trust and were recently annexed by the City of East Helena. The site's federal trustees and local stakeholders had a vision: to restore the original plant manager's house, outbuildings and adjacent creek for historical interpretation and ecological reuse. Stakeholders include the site's trust, multiple state and federal agencies, the local government, business interests and community organizations.

In May 2011, Region 8 hosted a workshop (pictured above) funded by EPA's Superfund Redevelopment Initiative to inform a focused reuse plan for the annexed land, the Prickly Pear Creek Corridor and the plant manager's house. The well-attended workshop led to a site reuse plan and final report that will inform the site's cleanup and identified opportunities to transition the site's ownership and phase in site reuses over time.

Reuse Video and Case Study Highlight Site Cleanup and Mixed-Use Revitalization

In 2011, EPA published an in-depth video and case study documenting the innovative cleanup and reuse of the Midvale Slag site in Midvale City, Utah. The case study explores this complex project, sharing key lessons learned with parties interested in learning more about mixed-use redevelopment and revitalization opportunities at contaminated lands. The companion video provides compelling footage and interviews with key stakeholders involved in the project.

To date, project outcomes include approximately 600 jobs, $1.5 million in annual property tax revenues and a $131 million increase in the value of the site property. Families have moved into new condominiums. Office buildings, stores and restaurants

are under construction. Crews have restored the banks of the Jordan River and replaced an old, defunct dam. Sections of Bingham Junction's Riverwalk Park have opened. A new Utah Transit Authority commuter rail station opened in August 2011.

The video and case study are both available at www.epa.gov/region8/superfund/ut/midvale.

The restored floodplain of the Clark Fork River in November 2011.

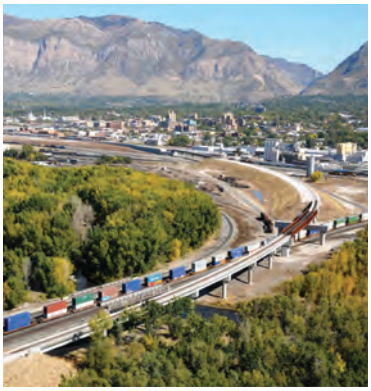
Case Study Highlights River Restoration and Reuse Outcomes in Montana

In April 2011, EPA's Superfund Redevelopment Initiative published a case study documenting the reuse of the Milltown Reservoir Sediments site in Milltown, Montana. One of the largest river cleanup and restoration efforts in the nation has led to multiple benefits. With the removal of the Milltown Dam and the restoration of the Clark Fork River, the Clark Fork and Blackfoot Rivers now flow freely for the first time in a century. More than 400 acres at the site have been transferred to the State of Montana for a new state park. Interim redevelopment activities, including several trails and a new pedestrian bridge, are planned and underway. More than $8 million in grant and state funding has been allocated for land acquisition and the park's development.

California Gulch (Leadville, Colorado): A $1.5 million public sports complex and soccer field now sits atop a former zinc smelter. The U.S. Soccer Foundation, one of EPA's national partners, awarded a $10,000 grant to develop conceptual plans for the facility.

2011 Reuse Highlights

All Superfund sites in Region 8 eligible for deletion from the NPL meet EPA's Sitewide Ready for Anticipated Use (SWRAU) measure. Region 8 is one of two EPA regional offices to have achieved this distinction.



2011 Phoenix Award for Innovative Site Reuse in Utah

For almost 150 years, the Ogden Rail Yard Superfund site in northern Utah has been the location of railway operations. Today, the Utah Transit Authority (UTA)'s FrontRunner commuter rail line extends across the site, providing service from Pleasant View to Salt Lake City. UTA coordinated the line's development with the site's cleanup, working closely with EPA. Ultimately, UTA also located a flyover bridge and passenger station at the site.

EPA has also worked with the community to integrate local reuse priorities with the site's remedy. For example, the former 21st Street Pond property has been renamed Goode Ski Lake, and is being returned to use as a fishing area and a water skiing park. The City of Ogden is also developing plans for new commercial development at the site. The site received a prestigious Phoenix Award in 2011 for achievement of excellence in Superfund site reuse.

Focusing on Environmental Health: Ecological Revitalization

WHAT IS ECOLOGICAL REVITALIZATION?

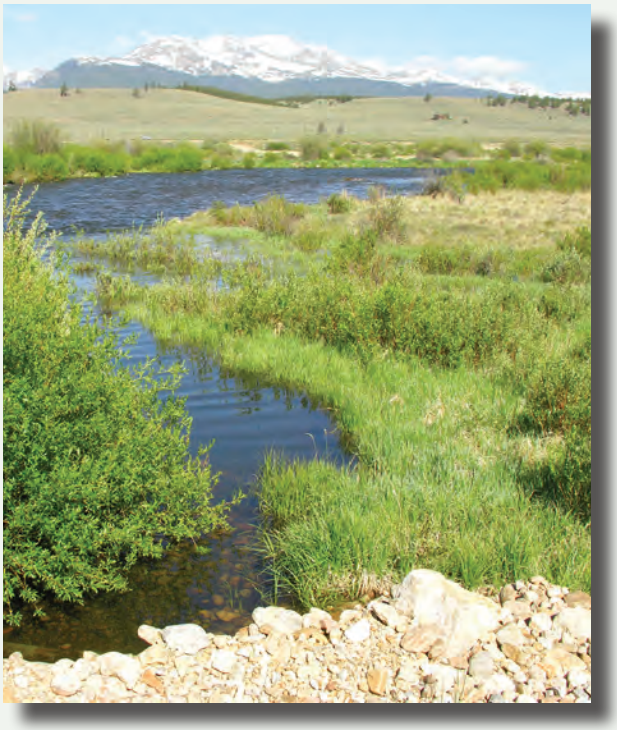
Ecological revitalization returns land from a contaminated state to one that supports functioning and sustainable habitat.

Ecological revitalization:

- Improves soil health and supports diverse vegetation.
- Sequesters carbon.
- Protects surface and groundwater.
- Provides wildlife habitat and passive recreation opportunities.

Through FY 2011, five sites in Region 8 are in planned or actual ecological reuse.

Innovative Evaluation of Ecosystem Impairments in Colorado



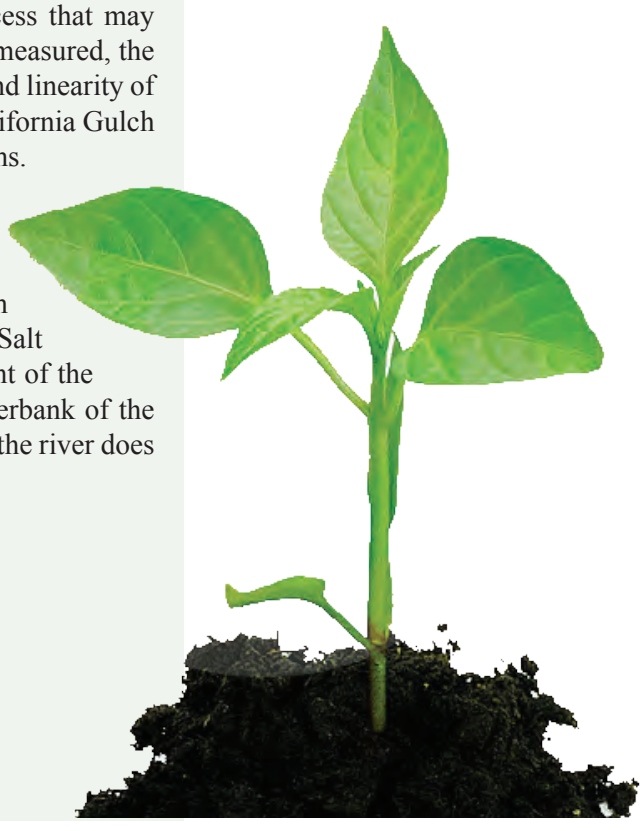
EPA evaluated impairments at the California Gulch site using the Stressor Identification (SI) methodology. The site is located in a highly mineralized area of Colorado's Rocky Mountains, and includes the 500-year floodplain and adjacent irrigated lands of the Upper Arkansas River from the confluence of California Gulch to approximately 11 miles downstream. The evaluation looked at several impairments, including barren areas in the floodplain (reduced vegetation) and reduced plant growth and plant species richness in meadows irrigated with water from the Upper Arkansas River.

Following analysis of several candidate causes, the evaluation found that interaction of elevated levels of metals with decreased pH is the likely cause of the barren areas in the floodplain. Similar evaluation of the irrigated meadows leads to the conclusion that elevated levels of metals are the cause of reduced plant growth and plant species richness in these areas. Aspects of the assessment process that may differ between aquatic and terrestrial systems include the critical variables measured, the degree of development of bioassessment criteria, the spatial heterogeneity and linearity of physico-chemical factors, and management practices. The project at the California Gulch site demonstrates the usefulness of the SI methodology for terrestrial systems.

This newly constructed dam at the Midvale Slag site is a steel-reinforced boulder structure that replaces a damaged sheet pile dam. The structure's low flow channels direct the water toward the center of the river to avoid riverbank erosion.

River Restoration Project Completed in Northern Utah

The Jordan River Riparian Improvement Project is now complete. From 2008 through 2011, EPA, the Utah Department of Environmental Quality, Salt Lake County, Midvale City and others have been working this final element of the Midvale Slag site cleanup. The goal of the project was to stabilize the riverbank of the Jordan River as it passes through the Superfund site. This work ensures that the river does not erode its banks and release contaminants buried at the site into the river.



The Region 8 Brownfields Program

Photos from top to bottom: Dahlia Square during cleanup and groundbreaking, the completed Park Hill Family Medical Clinic, and Dahlia Square Senior Apartments.

EPA's Brownfields program empowers states, communities and other stakeholders to work together to prevent, assess, safely cleanup and sustainably reuse brownfields. Revitalizing brownfields creates benefits at each site and throughout surrounding communities.

The Region 8 Brownfields program's accomplishments in FY 2011 include:

- Assessments Completed: 65
- Cleanups Completed: 15
- Dollars Leveraged: $8,414,985
- Jobs Leveraged: 239
- Acres Made Ready-for-Reuse: 801
- Properties Made Ready-for-Reuse: 23

In Region 8, the Brownfields program provides funds and technical assistance to states, tribes, communities and other stakeholders to clean up and redevelop potentially contaminated lands, making it easier for such lands to become vital, functioning parts of their communities.

EPA Cleanup Grant Helps Leverage Funding for Cleanup and Redevelopment

Built in the early 1950s on the site of a former brickyard, Dahlia Square was once the largest African American-owned shopping center in the United States. By the 1990s, however, as economic conditions changed, the vibrant neighborhood had begun to deteriorate. The Denver Urban Renewal Authority and the City of Denver created the Northeast Park Hill Urban Renewal Area to help restore the area.

Before redevelopment could move forward, contamination from the former brickyard had to be addressed. The community received a $200,000 Brownfields grant from EPA in 2005 for the cleanup of Dahlia Square. The grant was part of an array of federal, state and local cleanup resources totaling more than $7 million. The site's cleanup, completed in June 2006, included the excavation of 40,000 cubic yards of brickyard landfill materials and the removal of four underground storage tanks.

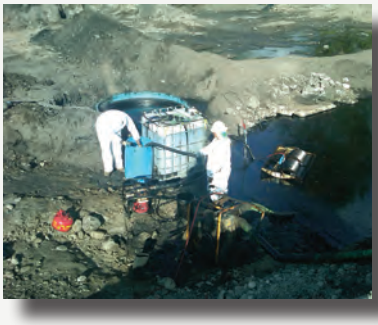
Following cleanup, the community has achieved several redevelopment milestones. In 2009, Denver Health opened its new 12,000-square-foot Park Hill Family Medical Clinic. In October 2011, the first phase of a 128-unit affordable housing complex for seniors was completed. The facility will meet the Colorado Housing and Finance Authority's Enterprise Green Community Standards for sustainable development. In total, the community has leveraged more than $19 million for the area's cleanup and redevelopment.

Tribe Cleans Up Brownfields, Receives Green Jobs Training Grant

The Standing Rock Sioux Tribe used EPA Brownfields funds to clean up two abandoned properties, the Old Warrior Motel and the Old Teachers Quarters, in 2011. Located in downtown Fort Yates, North Dakota, the properties posed significant health, safety and environmental risks to nearby residents and the Missouri River. The tribe plans to reuse the former motel for new affordable housing; the Old Teachers Quarters will be reused as park space and for teacher housing. EPA also provided Sitting Bull College with a $300,000 Workforce Development and Job Training Grant to support green jobs on the Standing Rock Sioux Reservation. The funds will be used to develop an environmental cleanup training program and assist with job placement.

Brownfield Properties in Colorado Reclaimed with EPA Support

The Urban Land Conservancy (ULC) used EPA Brownfields funding to assess and clean up three properties in the Denver area in 2011. ULC used $500,000 in EPA funds (through a loan and subgrants from the State) to clean up petroleum contamination at the former Avondale Festival Plaza, now called Mile High Vista. The cleanup will allow ULC and the City and County of Denver to move forward with construction of the Denver West Public Library, affordable housing, and commercial and non-profit development. ULC also used EPA Brownfields support to assess the Curtis Park Community Center and the Temple Emanuel property near downtown Denver. ULC plans to redevelop the community center into a preschool and the other property into a mixed-use project.



Brownfield Assessment and Cleanup Grants Unearth Major Oil Release

Once a railroad maintenance facility, the Milwaukee Roundhouse in Powell County, Montana, has become one of the state's top-priority sites. EPA awarded the county a Brownfields cleanup grant and additional site assessment funds. During a site visit, Region 8 staff observed significant amounts of a tar-like substance in the immediate area of nearby Tin Cup Joe Creek. Further investigation revealed a large buried vault containing Bunker Diesel fuel, which greatly increased the magnitude of the cleanup. EPA authorized $2.4 million under the Oil Pollution Act to recover an estimated 10,000 gallons of fuel and remove 14,000 tons of contaminated soil. Following cleanup, the property is slated to become a community park with regional trail connections.

Did You Know?

The City of Lakewood, Colorado, has been working with interested residents, students, businesses and community members on an innovative area-wide planning project linking economic development, job creation and community reinvestment in northeast Lakewood.

Funded partly by an EPA Brownfields grant, the project has resulted in plans to create the 40 West Arts District, link light rail with adjacent businesses and neighborhoods, improve pedestrian and bicycle connectivity, and revitalize some of the city's oldest and most historic areas.

Expanding Information Access, Ensuring Accuracy and Transparency

Communities and EPA's local, state, tribal and federal partners rely on Superfund program information. EPA staff members also rely on access to reliable, comprehensive information generated during the program's environmental restoration efforts. Region 8 works hard to ensure that this information is accurate, up-to-date, transparent, comprehensive and easily accessible, serving as a vital and valued shared resource.

NPL Site Data Improvement Effort

In 2011, the Superfund program continued updating Region 8 NPL site data and associated maps. This effort has improved how site boundaries, operable units, remediated areas, deleted portions of sites, institutional controls and other site features are depicted. This updated data assists EPA project managers throughout the Superfund decision-making process, ensuring accuracy and efficiency. In addition, maps aimed at helping the public gain a better spatial understanding of the sites are available on EPA Region 8's Superfund Web page.

New GIS Tools Support and Enhance Site Cleanups

Region 8 continues to integrate Geographic Information System (GIS) technologies into the Superfund cleanup process. At the Libby Asbestos site in Montana, for example, Region 8 deployed a browser-based mapping application in 2011 that shows the current investigation and removal status of each property within the site's boundaries. Region 8 project managers and management use the application to track site progress; field staff can also plan investigations and removals on a block-by-block or individual parcel level. When parcel status information changes, updated information is available via the map browser within 24 hours.

Updated Region 8 maps for the ASARCO Globe Plant site in Colorado (top) and the Mystery Bridge site in Wyoming (bottom).

Partnering, Consultation and Collaboration

To fulfill its mission of protecting human health and the environment, Region 8 actively collaborates with an extensive network of partners, including communities, states, tribes, local governments, public nonprofits, private sector organizations and other federal agencies. Region 8 relies on its government, nonprofit and private sector partners to help fulfill EPA's mission of responding to emergencies and cleaning up hazardous sites.

Tribal nations and states, for example, are vital partners in achieving EPA's mission. A large percentage of Region 8's programs are delegated to the 27 tribal nations and six states in Region 8, which carry out environmental work through cooperative agreements, contracts and other arrangements. The region also places a special emphasis on helping tribes administer their own environmental programs.

From initial site assessments to cleanups, from planning to implementation to long-term monitoring, the region's partnership network helps ensure the performance of all required Superfund cleanup work. In 2011, EPA awarded more than $3 million of Superfund monies to Region 8 states and political subdivisions. Through cooperative agreements, we are able to dedicate significantly more resources to the mission of protecting the environment than Region 8 alone could provide.

To maintain and improve the effectiveness of the Superfund program, Region 8 continues to build strong, collaborative relationships with its partners. Another focus area in our partnership with states is improving the ability to focus limited resources on priorities. In Region 8, EPA and states are collaborating on a priority-driven resource allocation process that makes sure resources are deployed to the most critical environmental problems.

Region 8 Partners *in Action*

The South Lincoln Park project in central Denver brings EPA together with federal and community partners under the Partnership for Sustainable Communities.

As part of the project, the Denver Housing Authority is transforming a 15-acre parcel containing 270 aging public housing units into a mixed-use, mixed-income, pedestrian-friendly transit-oriented development.

In 2011, EPA staff provided technical assistance for three design charrettes focused on opportunities to incorporate energy, transportation and stormwater/green infrastructure innovations as part of the project.

Looking Ahead: FY 2012

2011 Montview Corridor workshop in Colorado.

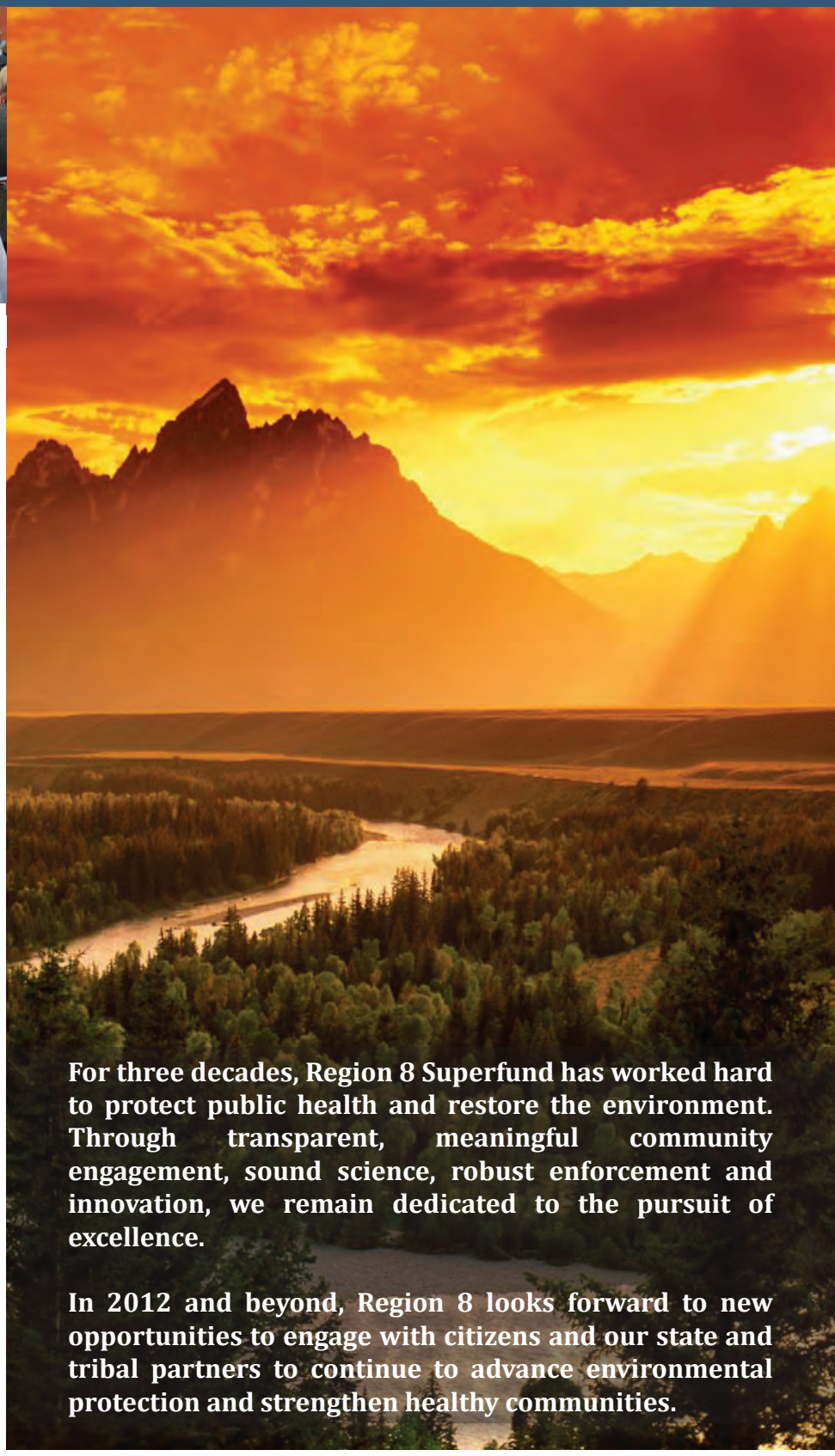
Innovative Brownfields Planning Pilot Projects Underway

The Region 8 communities of Aurora, Kalispell and Denver have completed their first year of piloting new Brownfields Area-Wide Planning grants. The localities will use the information gathered in 2011 to develop area-wide plans guiding the assessment, cleanup and reuse of brownfields in the planning areas.

Aurora held a series of public meetings focused on the community's redevelopment vision for the Montview Corridor, an area challenged by more than 40 brownfield sites. The city is now updating Aurora's comprehensive plan based on the community's feedback. The project's next phase is conducting an in-depth conditions and environmental survey of the Montview Corridor.

Kalispell has held public forums and meetings with property owners in the downtown CORE Revitalization Area to discuss the relocation of railroad tracks to encourage business expansion, redevelopment, infill development and connectivity. Kalispell identified 19 specific sites affected or potentially affected by brownfields issues and is working directly with three of these property owners.

Denver is focusing its efforts on the South Platte River Brownfields-Impacted Area, which includes properties along an 11-mile section of the river. The project's initial phase includes a corridor-wide analysis to identify high-potential sites for further consideration.



For three decades, Region 8 Superfund has worked hard to protect public health and restore the environment. Through transparent, meaningful community engagement, sound science, robust enforcement and innovation, we remain dedicated to the pursuit of excellence.

In 2012 and beyond, Region 8 looks forward to new opportunities to engage with citizens and our state and tribal partners to continue to advance environmental protection and strengthen healthy communities.

FY 2012 Goals

Region 8's Superfund Program continues to move sites toward final cleanups and deletion from the NPL, while also responding to newly identified sites and threats.

- Region 8 anticipates starting and completing eight remedial designs in FY 2012.
- It is anticipated that three new remedial actions will be started while work continues on other remedial actions already underway.
- Region 8 expects to complete 11 remedial actions, with site-wide construction completions being achieved at two sites.
- Seventeen Five-Year Reviews will be conducted at sites to ensure ongoing protection at sites where waste remains above levels that allow for unlimited use and unrestricted exposure.
- Ongoing work continues to identify and address risks at sites in the site assessment and removal programs, where Region 8 anticipates that 80 site assessments and 22 removal actions will be completed.

Government Performance and Results Act (GPRA) Goals	
Remedial Site Assessment Completions	80
Superfund-Lead Removal Actions Completed	15
PRP-Removal Actions Completed	7
Remedial Action Completions	11
Construction Completions	2
Human Exposure Under Control	2
Contaminated Groundwater Migration Under Control	2

Superfund Program Remedial Measure Goals	
Remedial Investigation / Feasibility Study (RI/FS) Starts	3
Records of Decision (RODs)	1
ROD Amendments	3
Explanations of Significant Difference	3
Remedial Design Starts	6
Remedial Design Completions	8
Remedial Action Starts	2
Five-Year Reviews	13

Superfund Program Federal Facility Measure Goals	
Decision Documents	3
Final Remedy Selected	1
RA or RCRA CMC Start	1
Five-Year Reviews	4

Hardrock Mining Updates

Region 8's Regional Mining Team focuses on issues relating to the regulation and cleanup of active, proposed and abandoned mines. FY 2012 priorities for the Team include:

- Assisting with the review of Environmental Impact Statements for proposed hardrock mines and in- situ recovery projects.
- Hosting EPA's National Hard Rock Mining Conference and Rare Earth Workshop in Denver, Colorado.
- Assisting with the development of financial assurance regulations for hardrock mines and processing facilities.
- Showcasing innovative cleanup work at abandoned mines in Region 8.

Long-term priorities for the Team include:

- Facilitating the development and implementation of innovative mine cleanup technologies.
- Facilitating internal cross-program communication and coordination of mining-related issues.

Region 8 Superfund's activities are built on a foundation of meaningful community engagement, scientific excellence, a network of dedicated partners and innovative approaches.

EPA
United States
Environmental Protection
Agency

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Region 8
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